

REMARKS

Claims 1-7 and 9, all the claims pending in the application, stand rejected. Claims 1 and 6 are amended. Claim 2 is cancelled.

As a preliminary matter, Applicants note for the record that claim 8 previously had been cancelled.

Claim Rejections – 35 U.S.C. § 102

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al (6,782,717). This rejection is traversed for at least the following reasons.

First, as already noted, the rejection with regard to claim 8 is moot as the claim previously had been cancelled. Further, the rejection with respect to claim 2 is moot because that claim is cancelled in the present amendment.

Saito et al

In framing the rejection at page 2 of the Office Action, the Examiner asserts that Saito et al teaches a method comprising the steps of polishing a glass substrate (18), use of a treating liquid at col.4, lines 1-4 (colloidal particles) and col.11, lines 29-31 (shows a liquid being pure water), a tape (23), a reduction in the disturbance of the texture (where the pure water for cleaning the glass substrate reads on this limitation), a magnetic layer (col.7, lines 28-30), and a texture being formed along a circumference direction of the magnetic disk (abstract).

According to the present invention as recited in the amended claims 1 and 6, the pure water is supplied onto the principal surface of the glass substrate after the texture is formed on the principal surface of the glass substrate. Consequently, it is possible to prevent adhesion of foreign matter during cleaning so that the uniformly textured surface is formed. Thus, it is possible to realize the high magnetic anisotropy.

Specifically, the disturbance of the texture formed on the principal surface of the glass substrate is reduced. The surface roughness of the texture has the specific range, i.e., Rmax of 5 nm or less and Rp of 3 nm or less, Rmax representing a maximum height and Rp representing a maximum peak height, respectively.

By contrast, in Saito, as described at col.7, lines 46-50, the acid treatment process is performed with the acid solution after the texture formation.

During the acid treatment process, the foreign matter is removed by etching the glass substrate. Thus, in Saito, the glass substrate is also etched. Accordingly, it is impossible to form the texture having the surface roughness of the specific range according to the present invention, i.e., R_{max} of 5 nm or less and R_p of 3 nm or less, R_{max} representing a maximum height and R_p representing a maximum peak height, respectively.

Furthermore, in Saito, by etching via the acid treatment process, the texture is inevitably disturbed, i.e., as to its shape. Even if the cleaning is performed for the disturbed texture by using the pure water, it is impossible to form a texture having the surface roughness of the above-specific range according to the present invention.

According to the present invention, the cleaning is performed by using the pure water after the texture is formed. Consequently, the cleaning is carried out without disturbing the texture formed on the principal surface of the glass substrate by the etching. Thus, the texture having a surface roughness of the above specific range can be formed on the principal surface of the glass substrate according to the present invention.

In the Response to Arguments section of the Office Action at page 4, the Examiner asserts the specific range recited in the claims is disclosed in Saito, at specific locations in the reference. However, this assertion is not correct because Saito fails to disclose the specific range according to the present invention, i.e., R_{max} of 5 nm or less and R_p of 3 nm or less, R_{max} representing a maximum height and R_p representing a maximum peak height, respectively.

Specifically, at col.5, lines 45-53 and claim 8, only the average roughness R_a is disclosed but R_{max} and R_p are not disclosed.

At col.6, lines 58-67, only the removal depth are disclosed but R_{max} and R_p are not disclosed.

At col.9, lines 66-67 and col.10, lines 27-34, only the maximum depth is disclosed but R_{max} and R_p are not disclosed. As would be understood by one skilled in this art, the maximum depth represents the acid resistance index and clearly differs from R_{max} representing a maximum height and R_p representing a maximum peak height.

Thus, for all of the foregoing reasons, the claimed invention cannot be anticipated by Saito et al.

Claim Rejections - 35 U.S.C. § 103

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (6,782,717) in view of Shimada (6,632,547). This rejection is traversed for at least the following reasons.

Saito et al

Saito et al is discussed and distinguished above. The Examiner admits that Saito et al does not teach chemical strengthened glass substrates.

Shimada

The Examiner asserts that Shimada teaches a method comprising the steps of polishing glass substrate (col.1, lines 53-55 and Fig.2a), a treating liquid (col.3, line 55 and col.5, lines 47-55 which shows a liquid having colloidal particles), a tape (col. 5, lines 47-53), and a chemical strengthening (col.4, lines 45-65 and throughout the patent) which also for strengthening of a glass substrate. The Examiner asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Saito et al device by providing the chemical strengthened steps for glass substrates, as taught by Shimada.

However, Shimada does not remedy the additional deficiencies of Saito et al, as noted above and in the previous Amendment. Thus, this rejection is overcome, at least for the reasons given with regard to the rejection under Section 102.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (6,782,717) in view of Saito et al (2003/0110803A1). This rejection is traversed for at least the following reasons.

Saito et al '717

Saito et al is discussed and distinguished above. The Examiner admits that Saito et al does not teach chemical strengthened glass substrates.

Saito et al '803

The Examiner asserts that Saito et al '803 teaches a method comprising the steps of polishing glass substrate (abstract), a treating liquid (40, having colloidal particles and pure water), a tape (30), and a chemical strengthening (abstract and throughout the patent) of a glass substrate. The Examiner asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Saito et al '717 device by providing the chemical strengthened steps for glass substrates, as taught by Saito et al '803.

However, Saito et al '803 does not remedy the additional deficiencies of Saito et al, as noted above. Thus, this rejection is overcome, at least for the reasons given with regard to the rejection under Section 102.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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